

- Q.03 *Resolve a weight of 10 N in two direct and perpendicular to a slope inclined at 30° to the horizontal.*
- Solution** Component perpendicular to the plane

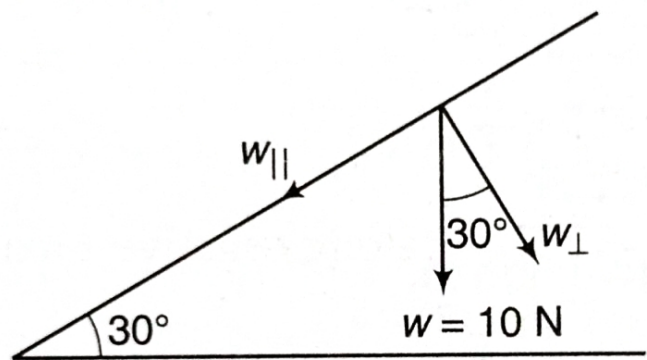


Fig. 5.29

$$\begin{aligned}w_{\perp} &= w \cos 30^\circ \\ &= (10) \frac{\sqrt{3}}{2} = 5\sqrt{3}\text{ N}\end{aligned}$$

and component parallel to the plane

$$\begin{aligned}w_{\parallel} &= w \sin 30^\circ = (10) \left(\frac{1}{2}\right) \\ &= 5\text{ N}\end{aligned}$$